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Current affairs summary for prelims

08 October 2024

India Becomes Fourth Nation to Reach $700 Billion in Forex Reserves

Context: India has made history by surpassing the $700 billion mark in foreign exchange (forex) reserves, joining an elite group of nations that includes China, Japan, and Switzerland. This significant milestone was achieved during the week ended on September 27, 2024, according to data released by the Reserve Bank of India (RBI).

- India's forex reserves increased by $12.6 billion during the week, marking the largest weekly rise since July 2023. With this addition, India's total forex reserves now stand at $705 billion, reflecting a strong balance of payments position.

Factors Contributing to the Forex Increase

- The boost in India's foreign reserves is attributed to several factors, including stable global oil prices and strong capital inflows into Indian stocks and bonds.
- The country's balance of payments (BoP) surplus, bolstered by foreign investments, trade balance, and remittances, has played a pivotal role in expanding the reserves.
- The reserves had grown by $2.8 billion to $692.3 billion in the previous reporting week before seeing a more substantial jump to over $700 billion.

Importance of Forex Reserves:

- **Buffer against sudden shocks:** Forex reserves are critical for maintaining the economic stability of a country. They serve as a buffer against external shocks, including currency volatility, sudden capital outflows, and trade imbalances.
- **Enhancing creditworthiness:** For a developing economy like India, large reserves provide the confidence needed to attract foreign investments and enhance the country's creditworthiness in global markets.
- **Maintaining the value of the Indian Rupee:** These reserves also help the RBI intervene in the foreign exchange market to manage the value of the Indian rupee. During times of excessive volatility, the central bank can use the reserves to buy or sell foreign currencies to stabilize the rupee.
- This was particularly evident in recent months when the rupee was trading close to a record low of 83.98 against the US dollar.

Challenges Ahead:

- Despite the increase in forex reserves, challenges remain. After peaking at $642 billion in September 2021, the reserves dropped to $525 billion within a year, primarily due to revaluation losses. The RBI's intervention to mitigate rupee volatility, combined with external factors like rising interest rates in advanced economies, has occasionally strained the reserves.
- Additionally, the RBI's interventions in the currency market do not necessarily imply a stronger rupee, as seen with the rupee continuing to hover near record lows.
- Another concern is the potential for a slowdown in reserve accumulation. Analysts at BofA Securities have predicted that India's forex reserves could reach $745 billion by March 2026, as the balance of payments surplus is expected to remain at a comfortable level of $40-50 billion annually. However, sustaining this level of accumulation will require continued efforts to attract foreign capital,

maintain trade balance, and manage external risks.

Nobel Prize in Medicine 2024

Context: The Nobel Prize in Physiology or Medicine for 2024 has been awarded to Victor Ambros and Gary Ruvkun for their groundbreaking discovery of microRNA and its crucial role in post-transcriptional gene regulation.

What is MicroRNA?

- The microRNA (miRNA) is a form of small, single-stranded RNA, 18–25 nucleotides long. It is transcribed from DNA, instead of being translated into protein and regulates the functions of other genes in protein synthesis. Therefore, miRNAs are genes that modulate other protein-coding genes.
- Occurrence: Found in plants, animals, and some viruses, miRNAs play a critical role in RNA silencing and post-transcriptional regulation of gene expression.

Functions of MicroRNA:

- Modulation of Protein-Coding Genes: miRNAs play a critical role in modulating the expression of other protein-coding genes.

Regulatory Mechanisms:

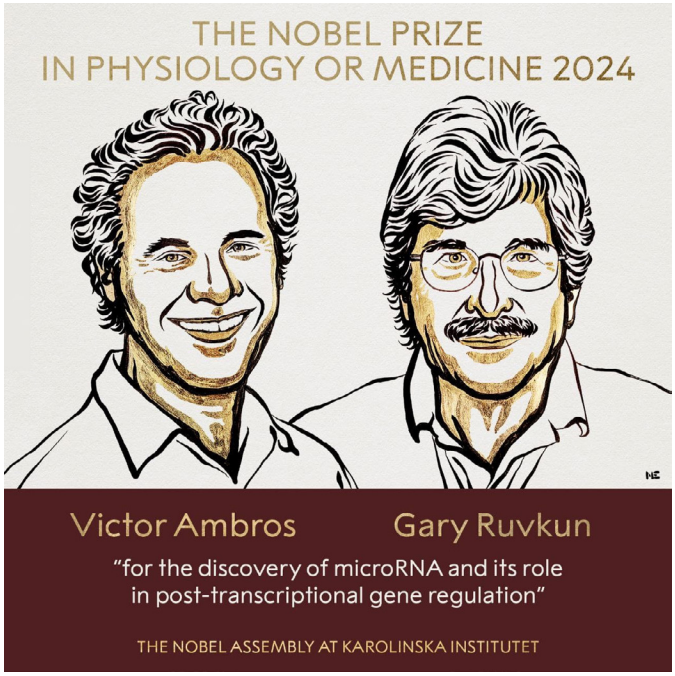
- Inhibiting Translation: Preventing the synthesis of proteins from mRNA.
- Inducing mRNA Degradation: Leading to the breakdown of mRNA molecules.
- Silencing Gene Expression: Effectively reducing the activity of specific genes.

Importance of MicroRNA:

- **Development and Differentiation:** Essential for proper cell development, differentiation, and growth.
- **Involvement in Diseases:** miRNAs are linked to various diseases, including cancer, cardiovascular diseases, and neurological disorders.
- **Therapeutic Potential:** They present potential targets for therapeutic interventions, offering new avenues for treatment.

Mechanism of MicroRNA Action:

- **Transcription:** miRNAs are transcribed from DNA as primary miRNA (pri-miRNA).
- **Processing:** These pri-miRNAs are processed into precursor miRNA (pre-miRNA).
- **Export and Maturation:** Pre-miRNAs are exported to the cytoplasm, where they are further processed into mature miRNAs.
- **Target Interaction:** Mature miRNAs bind to target mRNAs, regulating gene expression by either degrading the mRNA or inhibiting its translation.



Discovery:

- The concept of microRNA was pioneered by Ambros and Ruvkun, who revealed these tiny RNA molecules as a new principle of gene regulation, crucial for multicellular organisms, including humans.

Human Genome:

- The human genome encodes over 1,000 microRNAs, illustrating the complexity and nuance of gene regulation. Each microRNA can interact with multiple messenger RNAs (mRNAs), fine-tuning gene expression across various contexts.

About The Nobel Prizes:

- The Nobel Prizes were established by Alfred Nobel as

outlined in his 1895 testament.

- They are awarded to individuals or organizations that have conferred the greatest benefit to humankind during the preceding year.
- The first Nobel Prize was awarded in 1901, marking the beginning of a tradition that continues to honor remarkable contributions in various fields.
- Initially Nobel Prizes were awarded in five categories: Physics, Chemistry, Physiology or Medicine, Literature, Peace.
- In 1968, the Sveriges Riksbank Prize in Economic Sciences was introduced, provided by Sweden's central bank in memory of Alfred Nobel.

Odisha's Leopard Population

Context: Odisha's leopard population has seen a significant increase of 22% from 568 in 2022 to 696 in 2024, according to the 'All Odisha Leopard Estimation 2024 report'. This rise is a positive trend, but the current population is still lower than the 760 leopards recorded in the 2018 National Tiger Conservation Authority (NTCA) census

Methodology of survey:

- **Statewide Monitoring:** The estimation process involved extensive monitoring across 47 forest divisions by the Forest Department.
- **Field Survey:** Comprehensive surveys utilized signs such as pugmarks, scats, scrapes, and vocalizations to identify leopard presence.
- **Camera Traps:** Unique individual leopards were identified using camera traps that captured their distinctive rosette patterns, a scientifically recognized method for population assessment.

Key Habitats for Leopard in Odisha:

- **Protected Areas:** These regions show the highest abundance of leopards.
- **Similipal Tiger Reserve:** This reserve hosts the largest leopard population and is vital for dispersal to nearby Hadagarh and Kuldiha Wildlife Sanctuaries.
- **Satkosia Landscape:** Known for having the second-highest leopard population in the state.
- **Hirakud Wildlife Division:** This area, including Debrigarh Wildlife Sanctuary, supports a significant number of leopards.

Population Distribution:

- **Outside Protected Areas:** Notably, 45% of leopards reside outside protected regions, indicating a considerable presence in territorial forest divisions.
- **Rare Morphs:** The estimation also recorded melanistic leopards (black panthers) in three forest divisions.

Conservation Concerns in Odisha:

- **Poaching Issues:** Ongoing concerns about poaching and illegal trade persist, with 116 leopards reported killed for their skins between 2018 and 2024.
- **Seizures:** Between 2018 and 2023, authorities seized 59 leopard skins; an additional 57 were recovered by the Special Task Force from 2019 to 2024.

About Similipal National Park:

- Similipal is a prominent tiger reserve located in the Mayurbhanj district of Odisha, India.
- Part of Elephant Reserve: It forms a crucial part of the Mayurbhanj Elephant Reserve, which encompasses three protected areas: Similipal Tiger Reserve, Hadgarh Wildlife Sanctuary, and Kuldiha Wildlife Sanctuary.
- **Etymology:** The park derives its name from the abundant red silk cotton trees (Bombax ceiba) found in the region.
- **Tigers:** Similipal holds the highest tiger population in Odisha and is notable for having the population of melanistic tigers (black tigers).
- **Elephants:** Similipal is recognized for hosting the largest population of elephants in Odisha.

- **Conservation Status:** Since 2009, Similipal National Park has been designated as part of the UNESCO World Network of Biosphere Reserves, highlighting its ecological significance and commitment to conservation.

About the Indian Leopard:

- Indian Leopard (Panthera pardus fusca), widespread across the Indian subcontinent.
- **Characteristics:** Smallest of the big cats, adaptable to various environments, strong and agile, capable of climbing trees.
- **Conservation Status:** Classified as Vulnerable on the IUCN Red List; listed in Appendix I of CITES and Schedule I of the Wildlife (Protection) Act, 1972.

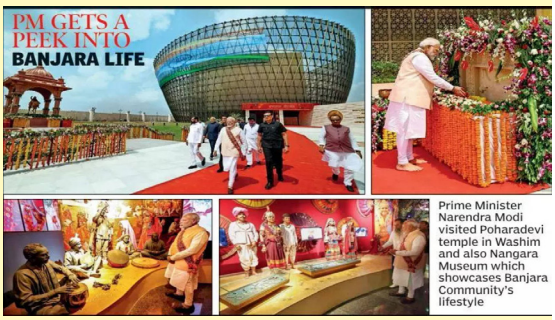
Power Packed News

'Nijut Moina' Scheme

- Recently, on 6th October, Chief Minister Himanta Biswa Sarma initiated the distribution of monthly financial assistance under the 'Nijut Moina' scheme in Assam.
- Chief Minister Himanta Biswa Sarma handed over financial assistance checks to 24,384 eligible girl students from Kamrup (M), Kamrup, and Morigaon districts during a ceremony held in Khanapara.
- 'Nijut Moina' is an ambitious scheme of the Assam government, aimed at providing financial assistance to meritorious and needy girl students of the state. The scheme aims to eliminate child marriage and encourage girls to pursue higher education.
- The scheme was launched on 8th August 2024 as part of a campaign against child marriage.
- The goal of the scheme is to benefit 10 lakh girl students over the next three years. In Assamese, 'Nijut Moina' means 'ten lakh girls.'

Prime Minister Inaugurates 'Banjara Heritage' Nangara Museum

- Recently, Prime Minister Narendra Modi inaugurated the 'Banjara Heritage' Nangara Museum at Poharadevi in Maharashtra. The Nangara Museum was conceptualized in 2018 by Sanjay Rathod to showcase the culture, history, and traditions of the Banjara community. Today, it stands as a world-class museum.



Prime Minister Narendra Modi visited Poharadevi temple in Washim and also Nangara Museum which showcases Banjara Community's lifestyle

- The museum is spread over 16 acres and features a blend of traditional and modern architecture, representing the rich heritage of the Banjara community.
- It has five floors and 13 galleries that display the history, culture, and traditions of the Banjara community.
- The museum includes advanced technologies like a flying theater, moving platform, and rumbling platform, providing a remarkable experience. Information about the history of the Banjara community is available in seven different languages, offering a global standard of experience.
- Poharadevi, located in the Manora taluka of Washim district, Maharashtra, holds great religious and cultural significance for the Banjara community. It is also known as the 'Kashi of the Banjara Community.' It is home to the tomb of Sant Sewalal Maharaj, revered by over 10 crore Banjara people across India, as well as the shrine of Ramraobapu Maharaj.

DefConnect 4.0

- Raksha Mantri Shri Rajnath Singh inaugurated DefConnect 4.0 at the Manekshaw Centre, Delhi Cantt. This event marked a significant milestone in India's defence innovation journey, organized by the Innovations for Defence Excellence -

Defence Innovation Organisation (iDEX-DIO) under the Ministry of Defence.

- DefConnect 4.0 aims to foster collaboration among the Armed Forces, Defence Public Sector Undertakings (DPSUs), industry leaders, start-ups, MSMEs, academia, and investors. The event featured a Technology Showcase, allowing iDEX innovators to exhibit cutting-edge technologies and products..
- Since its inception in 2018 iDEX has launched 11 editions of the Defence India Start-up Challenges, attracting over 9,000 applications and collaborating with over 450 start-ups/MSMEs to bolster the defence sector's growth and innovation.
- Innovations for Defence Excellence (iDEX) is the flagship initiative of the Union Ministry of Defence aimed at achieving self-reliance and fostering innovation and technology development in the Defence and Aerospace sectors.

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